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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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QUARLES & BRADY STREICH LANG, LLP
ONE SOUTH CHURCH AVENUE
SUITE 1700
TUCSON, AZ 85701-1621

EXAMINER

SINGH, DALZID E

ART UNIT PAPER NUMBER

2613

DATE MAILED: 10/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/758,408

Applicant(s)

HSIEH ET AL.

Examiner

Dalzid Singh

Art Unit

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,5,15 and 17-20 is/are rejected.
- 7) ☒ Claim(s) 2,4,6-14,16 and 21-25 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the limitation of claims 15, 17 and 27 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 17 and 27 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claims 17 and 27 recites, "...the tunable filter includes a rotating element that produces a retro-reflected beam, and said beam is utilized as a measure of an initial angle of incidence of an input beam for an initial calibration of an angle of rotation of the tunable filter; and an encoder to measure..." The disclosure as originally filled does not provide structure or circuit diagram as to show a person of ordinary skill how the tunable filter includes rotating element produces a retro-reflected beam, and said beam is utilized as a measure of an initial angle of incidence of an input beam for an initial calibration of an angle of rotation of the tunable filter and the encoder to measure said angle of rotation. Therefore, based on this, the specification fails to provide enabling disclosure for claims 17 and 27.

Claim 15, recites, "...tunable filter includes a rotating element that produces a retro-reflected beam, and said beam is utilized as a measure of an initial angle of

incidence of an input beam for an initial calibration of an angle of rotation of the tunable filter." The disclosure as originally filled does not provide structure or circuit diagram as to show a person of ordinary skill how the tunable filter includes a rotating element that produces a retro-reflected beam, and said beam is utilized as a measure of an initial angle of incidence of an input beam for an initial calibration of an angle of rotation of the tunable filter. Therefore, based on this, the specification fails to provide enabling disclosure for claims 15.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 17 and 27 are rejected under 35 U.S.C. 102(e) as being anticipated by Kuo et al (US Patent No. 6,369,923).

Regarding claim 17 (as far as understood in view of the 112 1st paragraph), Kuo et al disclose an optical system with a predetermined channel spacing, as shown in Fig. 8, comprising:

a tunable filter (54) to isolate a channel for processing out of said multi-channel communication system; and a detector (34, 35) to measure signal from the tunable filter.

Regarding claim 27, (as far as understood in view of the 112 1st paragraph), Kuo et al disclose method for processing optical signal, as shown in Fig. 8, comprising the steps of:

isolating for processing a channel out of said multi-channel communication system using a tunable filter (54);

utilizing said beam as a measure of initial calibration of the tunable filter (see 8, lines 29-64);

using detector (34, 35) to measure signal of the tunable filter; and calculating a wavelength error (processor (40) calculates wavelength error) based on information signal provided by said detector.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1, 3, 5 and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuo et al (US Patent No. 6,369,923).

Regarding claims 1, 18, 19 and 26, Kuo et al disclose optical system with a predetermined channel spacing, as shown in Fig. 8, comprising:

a wavelength beam splitter (33) characterized by a periodic spectral response with a period substantially equal to the channel spacing of the multi-channel communication system (see col. 8, lines 29-64);

detector means (34 and 35) for sensing and measuring a signal beams produced by the wavelength beam splitter; and

processing means (40) for calculating a signal ratio based on information derived from said detector means (see col. 8, lines 29-64).

Kuo et al disclose calculating signal ratio and generating correction signal as described above, and differ from the claimed invention in that Kuo et al do not disclose measuring of signal to noise ratio. However, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to measure signal to noise ratio of the signal beams in order to correct signal distortions.

Regarding claims 3 and 20, as shown in Fig. 8, Kuo et al show a tunable filter (54) to isolate a channel for processing out of said multi-channel communication system (see col. 8, lines 29-64).

Regarding claim 5, further including additional processing means for calculating a center frequency of a channel in said signal beam (see col. 8, lines 29-64).

Allowable Subject Matter

8. Claims 2, 4, 6, 7-14, 16 and 21-25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Palme et al (US Patent No. 7,041,959) is cited to show system and method for monitoring the performance of DWDM optical communication system.

Eldada et al (US Pub. No. 2003/0152385) is cited to show wavelength division multiplexing optical performance monitors.

Fishteyn et al (US Pub. No. 2004/0052522) is cited to show optical performance monitor utilizing nonlinear detection.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dalzid Singh whose telephone number is (571) 272-3029. The examiner can normally be reached on Mon-Fri 9am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DS
October 19, 2006

David Singh